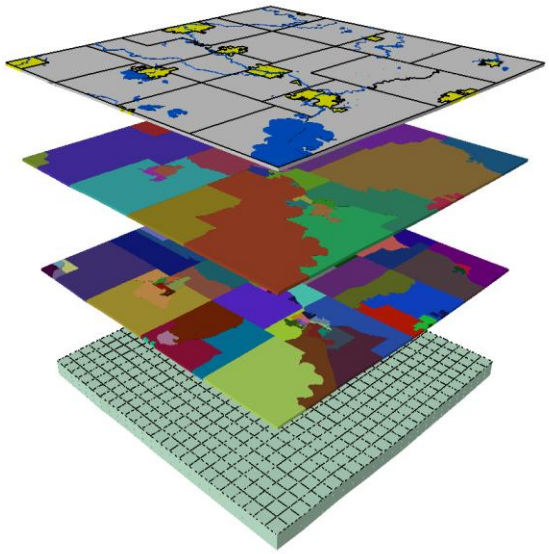
JEFFERSON COUNTY



LAND RECORDS MODERNIZATION PLAN

FEBRUARY 2011

AMENDED BY COUNTY BOARD
RESOLUTION NO 2013-95

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I. Executive Summary

A. County Identification and Contact Person

1. Primary Contact

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B. Participants

1. Jefferson County Planning and Zoning Committee

Steven Nass - Chair
Greg David
Donald Reese
Amy Rinard
Jan Roou

2. Jefferson County Land Information Council

Andrew Erdman - Director, Land Information Office
Staci Hoffman - Register of Deeds
John Jensen - County Treasurer
Robert Klotz - Director, Planning and Zoning Department
Joanne Larson - Jefferson County Realtor Association Representative
Todd Lindert - Communications Supervisor, Sheriff's Department
Steven Nass - County Board Representative
Mark Watkins - Director, Land and Water Conservation
Roland Welsch - MIS Information Technology Manager
Thomas Wollin - County Surveyor

3. Other Plan Participants

Gary Petre - County Administator
Dennis Heling - Director, Economic Development Consortium
Donna Haugon - Emergency Management Coordinator
Paul Novitzke - Fair Park Director
Roger Kylmanen - Fair Park Supervisor
Bill Kern, Highway Commissioner
Brian Udovich - Operations Manager, Highway Department
Joe Nehmer Director - Parks Department
John Rageth - MIS System and Applications Manager
Paul Milbrath - County Sheriff
Jeff Parker - Chief Deputy, Sheriff's Department
Michelle Staff - Zoning and On-site Waste Systems Technician
Kathleen Cauley - Director, Human Services
Susan Torum - Division Manager, Human Services

c. Plan Summary

The Jefferson County Land Records Modernization Plan 2011 will guide future improvements to the Jefferson County Land Information Systems. The Land Records Modernization Program has made improvements to millions of records and hundreds of processes that Jefferson County citizens depend on daily for economic, environmental and social stability.

The Plan identifies 71 new initiatives representing 12 County departments and the Jefferson Economic Development Consortium. All of the proposed modernization activities are consistent with general goals and objectives that form the overarching policy to guide land records modernization. Projects that were not accomplished in the 2005 plan have been incorporated into this update.

The first Jefferson County Land Records Modernization Plan was adopted by the Jefferson County Board of Supervisors in 1992. The plan was revised in 2000 and 2005. This revision of the plan has been developed in accordance to the **Uniform Instructions for Preparing County Land Information Plans, December 2009.** The Plan will undergo peer review by two County Land Information Officers in other counties. This Plan represents an agreement between Jefferson County and the Wisconsin Department of Administration (DOA). This agreement is intended to effectuate the objectives of the Program as embodied in the enabling legislation.

The Jefferson County Board of Supervisors formed the Land Information Office by Resolution 90-22 on June 12, 1990. The statutory Land Information Office duties include coordinating land information projects, developing a County-wide Land Records Modernization Plan, and reviewing and recommending projects from local units of government for Wisconsin Land Information Board grants. Resolution 90-22 also established a Land Information Advisory Committee which up until recently guided the development and implementation of the County-wide Land Information System.

The 2009 Wisconsin Act 314 required counties to form a Land Information Council to remain eligible for participation in the Land Record Modernization Program. Pursuant to Wisconsin Statute 59.72 (3m) the County Board formed the Jefferson County Land Information Council with the adoption of Ordinance 2010-09 on July 13, 2010. The Land Information Council shall review the priorities, needs, policies, and expenditures of the Land Information Office and advise the County on matters affecting the Land Information Office.

The Land Information Council works in an advisory capacity to the Jefferson County Planning and Zoning Committee and the County Board of Supervisors. Land information policies developed by the Council will be submitted to the Planning and Zoning Committee and County Board for official action.

Primary funding for the Land Information Program is through the Register of Deeds Document Recording fees. The County retains $6 for each document recorded to develop, implement, and maintain the countywide plan for land records modernization. The County also retains $2 per document for the provision of land information on the Internet, including the county's land information records relating to housing. An additional $2 per document is sent to the State of Wisconsin for program administration and Land Records Modernization Grants. State grant funds have been diverted in recent state budgets from the Wisconsin Land Information Program to land use planning grants. Training and education grants have been the only funding of this sort ever since 2003. The program also retains a portion of subscription fees for remote access to records in the Register of Deeds, Treasurer and Land Information Office.

Jefferson County has accomplished many of the goals and objectives outlined in 1992, 2000, and 2005 Land Records Modernization Plan. The projects completed included: County High Precision Geodetic Control Network, Digital Parcel Mapping, Digital Soils Survey, Digital Zoning Mapping, Digital Land Use Mapping, Zoning Permit Tracking, Document Imaging of Register of Deed and other land records, Public Access Interface to Geographic Information System (GIS) Layers. In most recent years Terrain Mapping, Land Records Search Website and Interactive GIS Mapping websites were completed.

D. Website Information

1. Land Information Office General County Website

The Land Information Office departmental webpage provides contact information, data request forms and fee schedules. http://www.jeffersoncountywi.gov

2. Land Records Search and GIS Maps

The Jefferson County Land Records Search provides public access to general real property information stored in county databases such as ownership, assessed value, taxes, parcel size, and sale amounts. The Geographic Information System (GIS) mapping website provides public access to interactive mapping layers such as tax parcel, county zoning, soils, orthophotography floodplain and wetlands. http://lrs.jeffersoncountywi.gov/

3. Land Records Portal

The Jefferson County Land Records Portal (JCLRP) is a subscription service that is designed for title searchers and other subscribers who require the most timely property records including ownership, sales, assessments, taxes, and zoning permits. The Land Information Office, Register of Deeds, County Treasurer's Office and Zoning Department update these databases daily. This service provides a more comprehensive and up to date view of property records than the Land Records Search general public website. http://www.jeffersoncountywi.gov/webaccess/index.php

E. Municipal Websites

A cursory search of municipal websites found the following land information on local municipal websites.

1. Village of Johnson Creek

The Village of Johnson Creek has numerous maps available on the plan commission page of their website. They include Zoning, Address, Park and Comprehensive Planning maps. http://www.johnsoncreek-wi.us/index.asp

2. City of Fort Atkinson

The City of Fort Atkinson website has a general City map on it website. http://www.fortatkinsonwi.net

3. City of Jefferson

The City of Jefferson website has a ward, zoning, existing land use, future land use, and soils/natural features maps. http://www.jeffersonwis.com

4. City of Waterloo

The City of Waterloo has an interactive map on their website that shows businesses, parks, public buildings and places. http://waterloowis.com

5. City of Watertown

The City of Watertown website has several maps including aldermanic, sanitation routes, brush pickup routes, police patrols, zoning and street construction http://www.ci.watertown.wi.us/

II. Land Information Plan

A. Goals and Objectives

1. General Goal Statements

These general goals and principles form the overarching policy to guide land records modernization activities in the years ahead. These policies cut across all types of land records and technology used to manage information resources.

- Provide more efficient and effective services to the citizens of Jefferson County
- Improve systems for keeping land records accurate and current
- Improve storage and retrieval capabilities
- Improve the access to land records for all users
- Inform and educate users of land information of current and future resources
- Improve land records integration and analysis capabilities
- Minimize duplication of resources between County departments and other public and private entities

2. Data Acquisition

The Land Information has traditionally been stored on paper maps, drawings and documents. The process of conversion to electronic format in itself provides an opportunity to identify and resolve land records anomalies. These anomalies include missing records, invalid indexing, and misfiled records. Where location information is required to further the goals and objectives, technologies such as Global Positioning System (GPS), orthophotography interpretation and Light detection and ranging (LIDAR) will be utilized to insure proper geographic referencing of data. The New Initiative section of this plan identifies GPS and aerial photo interpretation acquisition activities for County Park, Fair Park and Highway facilities. Optical scanning will be used to capture recorded documents in the Register of Deeds and plan documents for roads, bridges and culverts in the Highway Department. Data from outside sources will be acquired whenever possible. The information collected by these methods is stored in industry standard formats on storage area networks (SAN) or write once read many (WORM) disks that insure future accessibility to records. Storage backup technology will be utilized to maintain archival integrity. Data needs are coupled with the projects identified in the new initiatives section of this plan. A maintenance schedule will be developed for all land records identified for collection or automation to insure that they are updated in the future. These maintenance schedules will be documented in the metadata.

3. Technology Environment

The County Land Information System has four major components that are supported by the overall County computer networks. The database portions of these components have been designed to integrate from one component to another via common reference fields.

a) Geographic Information System

ESRI ArcGIS, ArcView and ArcGIS Server are the main software components of the GIS system. A storage area network that is replicated in a data center across town holds all of the geospatial databases in numerous raster and vector formats. These formats include ArcSDE – SQL server, Geodatabase, and shape. Legacy ArcInfo coverage data is in the process of being phased out.

b) IBM System I server databases

IBM DB2 System I database software is utilized to maintain and process most of the County's tabular land information. Property ownership, assessments, taxes, document indexes, grantor/grantee, tract index, land use permits, rezoning, variances and conditional use are the predominant land information held on the IBM System I

c) Document Imaging System

Oracle Image and Business Process software is utilized to index, store, and retrieve documents. A SQL Database Server, Distributed Software Management Server, Information Broker Server and a Plasmon AA16 Jukebox with Write Once Read Many (WORM) disks make up the primary components of the document imaging.

d) Internet Web Servers

(1) GIS Interactive Mapping and Land Records Search

ESRI ArcIMS and Varion Systems PV Web are the main software components in the interactive mapping system. The Land Records Search is HTML based program accessing databases to provide dynamic searches. Both systems are published by New Atlanta ServetletExec and Microsoft IIS Software. They are running on a dedicated Microsoft Windows Server. Migration of this public website to ArcGIS server is planned for early 2011

(2) Web Enabled Document Imaging

Oracle Webview and Microsoft IIS software are used to publish documents over the internet. This software is running on a Microsoft Windows Server.

e) Computer Networks

Each major county facility has a computer network of routers and switches that inter-connect by a fiber optic network.

B. Progress Report on Ongoing Activities

Metadata Inventory

The Land Information Office has completed Federal Geographic Data Committee (FGDC) compliant metadata for about 30% of the county-wide datasets. A complete inventory and FGDC metadata development for all significant datasets is planned.

Imagery

Orthophotography has become an important part of the County GIS. Additional imagery of the county should be obtained at a minimum of 5 year intervals. Opportunities to cost share with other agencies may increase the frequency of imagery. One foot pixel color orthophotography was acquired for the entire county in 2010.

Terrain mapping

Terrain mapping to produce 2 foot contour maps of the entire county was completed at the end of 2005. The project started with the north half of the county in 2004 and south half in 2005. The highway 26 bypass projects around the City of Jefferson and City of Watertown and construction of 4 lanes will cause significant terrain changes. Update of terrain mapping for the entire county is in the planning stages for 2015.

Land Records Web Access

Performance and other enhancements were made to the Land Records Search in 2009. Land use permits, private sewage system, rezoning, variance and conditional use petitions have been added to the Land Records

Search website. The GIS Interactive mapping will be replaced with a ArcGIS server application in 2011. The new application will upgrade aesthetics, search and printing capabilities.

GPS Survey of Public Land Survey Corners

The 2,100 Public Land Survey Corners were re-monumented from 1970 to 1992 and surveyed to the State Plane Coordinate system by conventional survey methods from 1991 through 1995. Jefferson County installed a High Precision Control Network in 1993. A single frequency Global Positioning System was purchased in 1998 to re-survey the Public Land Survey Corners to a higher level of accuracy. The single frequency GPS was replaced with a dual frequency GPS system in 2006. This new survey information will perpetuate the location of the re-monumented corners indefinitely, should the physical monument become obliterated. The County Surveyor has completed GPS surveys on 1930 of the 2100 Public Land Survey Corners over the past 15 years. Many of the remaining corner locations to be surveyed are under tree canopy, which require two GPS setups and or conventional traverse. The GPS survey is expected to be completed in 2011.

Upgrade the Digital Parcel Map Base

The digital parcel maps are being upgraded on a daily basis as new property surveys are filed in the County Surveyor's Office or recorded in the Register of Deed Office. The Land Information Office has developed new parcel map base for the City of Watertown that replaces an old base that has inherent positional irregularities.

County-wide Zoning Map

Zoning maps are complete for all 16 Towns and 2 Villages in Jefferson County. The City of Watertown Zoning codes have recently be incorporated into the county map base. The Land Information Office has worked with other Cities and Villages to incorporate their zoning information into the county-wide GIS. Paper zoning maps have been obtained from all cities and villages. However, the information has not been integrated into the county GIS system at this time. The Land Information Office will work toward implementing a system for cities and villages to create a county-wide zoning map for eventual display on the county GIS website.

Integrate Geographic Information System, IBM System I and Document Imaging Systems

The Geographic Information System, IBM System I, Document Imaging, GIS Web Server and Document Imaging Web Server are utilized to manage and process land information. Document images and GIS maps are linked to the IBM System I Land Records Browser and public access Land Records Search applications. The links call on the Document Imaging Web Server and GIS web Server to display documents or maps. Public workstations in the Register of Deeds Office have also been setup to view documents through the Document Imaging web server. Further integration of these systems is being pursued with each application enhancement.

Land Use Inventory

The most recent land use inventory for the towns was created from the orthophotography taken in April of 2008 pictometry flight. An update of this inventory will be needed in the future to evaluate the Agricultural Preservation and Land Use Plan and ordinances. Land use inventories for cities and villages were done for most cities and villages during their comprehensive planning process in 2008. Integration of these datasets will be developed as part of the work needed for a future land use map update.

Back scanning and indexing Register of Deeds and Zoning Department Records Documents

The Document Imaging System was installed in the Register of Deeds Office in 1996. All documents on the imaging system are available via the county computer network. An imaging web server was setup to provide wider access the document images to all county staff via web browsers.

The Register of Deeds Office began scanning and indexing recorded documents in 1997. Vendors were contracted to back scan and index recorded documents that were stored on microfiche cards. The microfiche

documents date back to 1978. Back scanning of paper recorded documents has been completed back to 1901. There are about 227,000 pages or Register of Deeds records that are planned for back scanning dating back to 1838. Vendors will be hired to complete most this work as recourses become available.

The Zoning Department has implemented imaging applications for land use permits, private sanitary sewer permits, and petitions for rezoning, conditional use and variances. Petitions for conditional use and variances documents have been back-scanned dating back to 1975. Land use permits have been scanned back to 1980. Private sanitary sewer permits have been back-scanned dating back to 1975. Petitions for rezoning have been back-scanned dating back to 1999. Permit reference cards for land use and sanitary permits have been scanned years 1968 through 1979. The petitions for rezoning back-scanning will continue on documents dating back to 1975, as staff time allows.

All Plats of Surveys and Government Corner records filed in the County Survey's Office have been back-scanned and indexed. Rural address assignments in the Land Information Office dating back to 1984. Most of this work was completed in 2001. New address and survey documents are scanned and indexed on a monthly basis.

The Treasurer's Department and Land Information Office use the Computer Output to Laser Disk (COLD) software module to store several reports produced on the IBM System I Land Records System. The reports are loaded directly from the IBM System I and can be viewed and printed with form overlays that are virtually identical to the original documents. The reports dating back to 1998 include Assessment Rolls, Tax Rolls and Tax Bills for both real and personal property. Real estate tax bills pdf image files were loaded on the imaging system beginning in 2008. The pdf format was used because the current property tax bill format is not well suited for COLD processing.

C. New Initiatives

1. Proposed Projects

Jefferson County will undertake new initiatives that are consistent with the modernization plan goals and objectives. These projects will use advances in technology to provide a wide array of services to land records customers. The projects in this section are sorted alphabetically by department. The initiatives within each department are in the order of priority.

Department: Economic Development Consortium		**Ranking Factors**						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Develop an automated system for providing community business park information such as site plans, transportation, utilities, and business park occupants to assist recruitment of potential new businesses.	$9,000	Yes	L, C, S	Yes	Yes	No	
2.	Develop a GIS map layer for Tax Incremental Finance districts. (TIF)	0	No	L, C, S	Yes	Yes	No	

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Department: Emergency Management		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Implement a structure and crop damage assessment program utilizing the GIS, property assessment and other data to rapidly meet FEMA reporting requirements for disaster assistance.	0	No	L, C, S, F	No	Yes	Yes	
2.	Develop an interactive web portal for maintaining and displaying the geospatial information in the All Hazards Mitigation Plan and computation of population estimates for hazardous materials (HAZMAT) site planning.	0	No	L, C, S, F	No	Yes	Yes	
3.	Implement an interactive system for updating the flood hazard cost estimates in the All Hazards Mitigation Plan by integrating previous damage assessment data with the 2009 Flood Insurance Rate Maps (FIRM) and the upcoming floodplain restudy of the Rock River	$15,000	Yes	L, C, S, F	No	Yes	Yes	Need for All Hazards Mitigation Plan Update
4.	Develop a GIS road closer application to track and alert 911dispatch, emergency responders and the general public of closers and alternative routes.	0	No	L, C, S, F, N	Yes	Yes	Yes	
5.	Implement the capability to predict the extent of flood inundation based on nation weather service stream water elevation level estimates or implement Hazards U.S. Multi-Hazard (HAZUS-MH) program developed by FEMA to model flood prone areas.	$10,000	Yes	L, C, S, F, N	Yes	Yes	Yes	

Department: Emergency Management - continued		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
6.	Develop GIS projects, routines and recourses that provide Emergency Operations Center (EOC) personnel with geospatial information that provides a clear situational awareness that can be incorporated into E-Sponder and the Emergency Operations Plan.	0	No	L, C, S, F, N	No	Yes	Yes	
7.	Implement routines for integrating critical and special facilities GIS data in the Computer-Aided Management of Emergency Operations (CAMEO) program, Aerial Locations of Hazardous Atmospheres (ALOHA) program and the All Hazards Mitigation Plan.	$10,000	Yes	L, C, S, F	No	Yes	Yes	

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Department: Fair Park		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Develop facilities mapping to inventory and management Fair Park amenities such as building, electrical, gas, water, roads, camping areas and other features. An up to date facilities map will assist in asset management, emergency planning, event planning and Fair Park promotion.	$6,000	Yes Intern	C, N	Y	Y	N	

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Department: Highway		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Develop GIS layers for bridges and culverts with links to national bridge inventory database	$5,000	Yes Intern	C, L, S, F	No	Yes	Yes	
2.	Develop and interactive GIS system to provide integrated access to road, bridge, culvert databases and documents.	0	No	C, L, S, F	Yes	Yes	Yes	
3.	Implement document imaging applications to manage, store and retrieve road, bridge and culvert construction plan documents. Consolidate duplicate plan records held in the Highway Department, County Clerk, Land Information Office and Register of Deeds Office.	$10,000	Yes	C, L, S, F	Yes	Yes	Yes	
4.	Utilize GPS Automatic Vehicle Location (AVL) data from snowplowing management system to manage highway department resources for maintenance and construction activities.	$15,000	Yes	C, L, S, F	No	Yes	Yes	Project would utilize previous investment in AVL for snowplowing
5.	Develop a Traffic Code GIS layer to assist in sign placement and pavement marking for no passing zones on county highways	$5,000	Yes Intern	C	No	Yes	Yes	
6.	Develop a sign inventory GIS layer utilizing data collected with reflectometer readings. The traffic sign base map would be ported to laptop computers or printed for field use.	0	No	C, L	No	Yes	Yes	Approximately 4,500 County and 2,500 local traffic signs are maintained

Department: Highway - continued		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
7.	Implement a traffic safety analysis system that incorporates the state accident database with the accident GIS layer.	0	No	C, L, S, F	Yes	Yes	Yes	
8.	Incorporate town road record index maps into GIS mapping system with road segment links to town road resolution documents	$4,000	Yes Intern	C, L	Yes	Yes	No	

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Department: Human Services		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other Factors**
1.	Implement an automated GIS application for routing and scheduling of the volunteer driver program. The program coordinates the transportation needs of elderly/disabled people with about 15 volunteer drivers who have variable availability and home locations.	$4,200 per year for SAS Software	Yes	C, S, F, N	No	Yes	Yes	
2.	Utilize GIS to create client distribution zones for the community support programs. The zones would be used to manage recourses by proximity grouping of client assignments.	$3,000	No	C, S, F, N	No	Yes	Yes	

SAS – Software as a Service

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Department: Land and Water Conservation		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other Factors**
1.	Implement database collection and reporting software to meet requirements of Wisconsin Administrative Code NR 151 performance standards and prohibitions for agricultural facilities and practices.	3000	No	C, S, F	Will become available	Yes	Yes	Software available from 3rd party vendor.
2.	Scan and rectify historical aerial photographs for GIS overlay.	100	No	L,S,C	Yes	Yes	No	Storage of files may required external hard drive
3.	Update non-metallic mining portion of the property assessment and tax system to facilitate data input, permit tracking and data distribution.	0	No	S,C	Yes	Yes	Yes	Update current data for storage on AS 400
4.	Implement program oriented web mapping services for distribution of land and water conservation program data to internal and external customers.		No	C,L,S	Yes	Yes	Yes	Requires initial training & set-up
5.	Develop a one meter grid surface GIS layer from 2004/2005 terrain mapping for conservation project analysis		No	C,L,S				
6.	Develop geoPDF or similar technology to distribute geospatial data to nutrient management consultants and others.	5900	No	C,L	Yes	Yes	No	3rd party enterprise software
7.	Integrate national agriculture statistics land cover layer into GIS holdings for crop change monitoring.	0	No	C,L,S,F	Yes	Yes	Yes	Download & file processing0

Department: Land and Water Conservation - continued		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other Factors**
8.	Correlate surface water data for rivers, lakes, streams, ponds and ditches to the terrain model to identify drainage patterns and watershed boundaries.	0	No	C,S,F,L	Yes	Yes	Yes	Considerable time processing & creating database
9.	Develop subsurface geology and ground water model flow GIS layer.	0	No	C,S,F,L	Yes	Yes	No	Data is being compiled by state agency
10.	Develop metadata for all county-wide map layers maintained for land and water conservation purposes.	0	No	C,L	Yes	Yes		Necessary for data sharing compliance
11.	Maintain a GIS layer for all permanent agriculture or conservation easements.	0	No	C,L	Yes/ with land-owners consent	Yes	No	
12.	Develop an aquatic invasive species inventory GIS layer and distribute this data on a web mapping application	0	50 hrs intern	C.L,S	Yes	Yes	No	Create generalized version of current data

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Department: Land Information Office		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Replace internal GIS Interface use by about 30 county staff with an internet based ArcGIS server application. Users numbers are currently limited by Arcview 3.2a licenses	$14,000	Yes	C, L,S, F, N	Yes	Yes	Yes	
2.	Replace the Public GIS website that is now based on ArcIMS software with an ArcGIS Server application.	$2,000 Modifications to Internal Server App	Yes	C, L,S, F, N	Yes	Yes	Yes	
3.	Integrate Pictometry image data into internal ArcGIS server application.	0	No	C, L, S, F, N	Yes	Yes	Yes	
4.	Develop a dashboard web page to incorporate Land Record Search, document imaging and GIS capabilities into one web browser application.	0	IT Staff	C, L, S, F, N	Yes	Yes	Yes	
5.	Update county-wide terrain model developed in 2004/2005 with a new LIDAR acquisition. The Highway 26 corridor would be the highest priority.	$232,000	Yes	C, L,S, F, N	Yes	Yes	Yes	major changes to land terrain by highway construction
6.	Acquire new oblique pictometery imagery in the next 4 to 8 years. First pictometry acquisition was in 2008	$50,000	Yes	C, L, N	Yes	Yes	Yes	
7.	Implement Self Hosting Pictometry One Line for to provide access to other governmental agencies.	$7,200	Yes	C, L, S, F, N	Yes	Yes	Yes	

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Department: Management Information Systems		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other Factors**
1.	Consolidate land information servers through virtualization. HP server: $25643 VM Ware licenses: $10000 Use existing Left Hand SAN after upgrade to more capacity	$37,643	Yes $2,000	C	Yes	Saves electrical power, prepares for faster disaster recovery response	Yes	
2.	Upgrade Storage Area Network (SAN) to accommodate increasing data volume requirements for redundant land information data storage. Cybernetics 32T RAW storage $18510	$19,510	Yes $1,000	C	Yes	Replaces existing Left Hand SAN	Yes	
3.	Upgrade data backup systems for offsite archiving of land information. Unitrends or appliance	$20,000	Yes $1,000	C	No	Replace existing tape drive system	Yes	
4.	Integrate continuity of operations and disaster recovery plans to facilitate rapid redeployment of land records data and applications that support the Emergency Operations Center (EOC) and other critical land information services.	$32,000	Yes $32,000	C, L, S, F, N	No	Prepares for faster disaster recovery response	Yes	
5.	Deploy reverse proxy technology to increase data and system security by moving web based server applications behind firewall.	$12500	Yes $2000	C, L, S, F, N	Yes	Saves time from copying databases down to web servers repeatedly	Yes	

Department: Management Information Systems Cont.		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other Factors**
6.	Increase internet bandwidth available for expanding web based land information applications. Wiscnet yearly fees $8000/yearly Charter connection fees $24000/yearly	$33000	Yes $1000	C, L, S, F, N	Yes	Yes	Yes	Provides faster connection for the general public look up of public records, provides faster web browsing for employees
7.	Develop handheld and other mobile applications to support onsite access to land information. Info from John R.	$32000	No	C	Yes	Yes	No	
8.	Deploy personal computer virtualization for appropriate land information users. HP Hardware $25643 Software $3000 / 10 pcs	$30893	Yes $2000	C	Yes	Yes	No	
9.	Develop a GIS layer for fiber optics lines, data centers and switch locations.	$1500	Yes intern	C	No	Assists in Continuity of operations	Yes	

C - County Departments
L - Local Units of Government
S - State Agencies
F - Federal Agencies
N - Non-Profit Agencies

Department: Parks		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing Required for Project**	**Supports Multiple Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other Factors**
1.	Use GIS modeling capabilities to develop a Land Evaluation and Site Assessment (LESA) system to locate and assess potential sites for land and river based parks, natural areas, and land or water trail linkages for outdoor recreation.	0	No	C, S, N	No	Yes	No	Facilitates Glacial Heritage Area Plan Implementation
2.	Develop county trail, park and natural area facilities mapping to inventory, manage and promote park and outdoor recreation amenities.	$7,000	Yes Intern	C, S, N	Yes	Yes	No	
3.	Develop a public interactive Web GIS application to promote County parks, trails and other outdoor recreation opportunities.	0	No	C	Yes	Yes	No	
4.	Implement biking and water trail suitability assessment system for roadways and waterways designated for biking and paddling.	$5,000	Yes	C, S, N	No	Yes	No	

C = County Departments
L = Local Units of Government
S = State Agencies
F = Federal Agencies
N = Non-Profit Agencies

Department: Planning and Zoning		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Revise and develop database, GIS and imaging applications to meet Working Lands Initiative reporting requirements under chapter 91 Wisconsin Statutes subject to Farmland Preservation Plan and Ordinance recertification.	0	No	C, L, S	No	Yes	Yes	Annual reports to DATCP 3-1 each year…data and map
2.	Revise and develop database, GIS and Imaging applications for private sanitary sewage system inventory, pumping, compliance monitoring and reporting as required under Wisconsin Administrative Code 83.54	0	No	C, S	Yes	Yes	Yes	Involves private business as well as State agencies and the public
3.	Create a City and Village Master Plan GIS layer for land use assessments.	0	No	C, L, S	Yes	Yes	Yes	County Plan-Compliance with city master plans
4.	Develop a flood damage assessment application to integrate GIS, property assessment, Survey and FEMA assessment data from past and future flood events to evaluation substantial flood damage. Facilitate sharing of damage assessment data for ongoing mitigation efforts. Scan and link previous flood damage assessment paper records to damage assessment system.	$7,000	Yes	C, L, S, F	Yes	Yes	Yes	Mandated by NFIP/FEMA and State
5.	Develop database and GIS application for rezoning, conditional use and variance petitions to streamline workflows of applications, map compilation and finding of the facts to minimize duplication of data entry	0	No	C, L, S	Yes	Yes	Yes	MIS workflow chart for entire Zoning operation with ties to other departments

Department: Planning and Zoning - continued		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
6.	Implement workflow processing for appropriate land records processes that require actions by several county staff and or departments such as land divisions approval, intensive agricultural permits, non-metallic mining and shore land permitting.	0	No	C, L S	Yes	Yes	Yes	See note for #5
7.	Develop a GPS and GIS application to map new and replacement private sanitary sewage system components during the inspection process	$5,000	No	C, S	Yes	Yes	Yes	Plumbing inspections using GPS
8.	Scan and enter pre-2001 zoning and private onsite waste treatment system violation files including violations for Rubidell Campground lots from 1994 to 2010.	$8,000	Yes	C, S, F	Yes	Yes	Yes	
9.	Scan Drainage District records for active and inactive drains for permanent records retention.	$16,000	Yes	C, D	Yes	Yes	Yes	Records preservation-Zoning Dept mandated custodian.

C - County Departments
D - Drainage District
L - Local Units of Government
S - State Agencies
F - Federal Agencies
N - Non-Profit Agencies

Department: Register of Deeds		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing Required for Project**	**Supports Multiple Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Develop an imaging application to scan and index grantee/grantor indexes that cover years 1838 to 1986. Scanning and indexing of about 85,000 pages into this application will provide computer access the index pages and preserve these documents for disaster recovery.	$37,000	Outside vendor would be needed to complete	C, L, S, F, N	Yes	Yes	Yes	Document preservation/disaster recovery
2.	Complete scanning and indexing of recorded documents that include deed volumes 1 to 116 (approx. 70,000 pages), files cabinet documents 58 through 78 (approx. 50,000 pages), miscellaneous volumes 1 to 27 (approx. 20,000 pages), and 3 land patent books approx. 2,000 pages. Also review certified survey map images for rescanning and replacement of poor quality images.	$51,000	Outside vendor would be needed to complete	C, L, S, F, N	Yes BY FEE PER STATUTES	Yes	Stat 59.43(1)(d)	Document preservation/disaster recovery
3.	Further development of tract index application data entry and search capabilities.	0	IT STAFF	C, L, S, F, N	Yes	Yes	Yes	Cost would depend on IT staffs ability to work on
4.	Enhance processing capabilities of electronic recording of documents by adding additional monitors to staff workstations. Configure imaging system filer program for automatic import electronic documents that have been processed.	$800		C, L, S, F, N	No	Yes WE WILL SAVE ON PRINTING, SCANNING AND INDEXING	Yes	I anticipate that more documents will come via e-Record each year

Department: Register of Deeds - Continued		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing Required for Project**	**Supports Multiple Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
5.	Develop an internet search application for the general public and title searchers that doesn't require access to Jefferson County Register of Deeds indexes or documents on a regular basis. The search program would provide ability to find and acquire documents copies that might otherwise require an office visit or staff search and retrieval.	IT STAFF TIME	IT STAFF	C, L, S, F, N	Yes	Yes	Yes	This will save staff time and assist the public – we will need a credit card application created
6.	Develop a Tract Index GIS layer to be linked to the tract index and other search programs for quick access to parcel maps and other geospatial data**.**	IT STAFF TIME	IT STAFF	C, L, S, F, N	Yes	Yes	Yes	Cost would depend on IT staffs ability to work on

C - County Departments
L - Local Units of Government
S - State Agencies
F - Federal Agencies
N - Non-Profit Agencies

Department: Sheriff		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Integrate state accident database with accident mapping GIS layer for geospatial analysis.	0	No	C, L, S, F	Yes	Yes	Yes	
2.	Develop crime-mapping analysis that utilizes the Sheriff Department records system databases.	0	No	C, L, S, F	No	Yes	Yes	
3.	Develop GPS based automated vehicle location system to manage emergency response resources.	$14,000	Yes	C	No	Yes	Yes	

C - County Departments
L - Local Units of Government
S - State Agencies
F - Federal Agencies
N - Non-Profit Agencies

Department: Treasurer		Ranking Factors						
Dept. Priority	**Task**	**Cost Estimate including added staffing**	**Additional Staffing or Contracting Required for Project**	**Supported Departments or Agencies**	**Provides Public Access**	**Increased Efficiency or Cost Savings**	**Supports Statutorily Mandated Functions**	**Other**
1.	Implement remote posting and collection system for taxes collected by local treasurers to improve the accuracy and timeliness of county tax payment records during first payment collection process.	0	No	C, L	Yes	Yes	Yes	
2.	Scanning of the historical property tax rolls	$17,000	Yes	C, L, N	Yes	Yes	Yes	

C - County Departments
L - Local Units of Government
S - State Agencies
F - Federal Agencies
N - Non-Profit Agencies

2. Assistance Requested

a) Technical Assistance

Technical Assistance will be obtained in several ways that include affiliation with numerous professional associations, state, federal, university contacts and private consultants. Front line support for GIS and document imaging will be done through software and maintenance agreements with respective vendors. Support agreements are maintained by the County that provides access to the most recent technology advancements.

b) Program Financing

The Wisconsin Land Information Program (WLIP) document recording fees retained by the County and WLIP grants will continue to be a significant source of funding for land records modernization projects. The County has provided personnel and added tax levy funds when the revenue stream from the WLIP were not enough to move projects forward in a timely manner. A portion of WLIP funds will be to maintain support agreements and upgrade hardware to systems current with the most recent technology advancements. Some WLIP funds may be used to offset County personnel costs related to the land records data collection such as internships and GPS survey of public land survey monuments. Most of these in-house personnel costs for data collection will continue to be funded by tax levy funds. Other funding partnerships or mechanisms will be used to assist in accomplishing the goals of this plan when viable.

c) Ensuring Access to County Data

The County has developed a Land Records Search and GIS public website to provide access to property ownership and related data. A subscription service is also available for title and other searches that require more detailed information than might be needed by the casual user. Custom maps, reports and searches are available on a fee basis GIS data can be obtained for a charge that is determined by the Inter-departmental Fee Schedule.

d) Participation in Statewide GIS repository

The County has developed a data sharing policy that allows waiving fees for other governmental entities and some non-profit agencies. Distribution to a state-wide GIS repository may require some changes to the County policy for distribution of GIS data sets that is in Section II. F. C. Jefferson County will consider details of the state-wide GIS repository distribution policy before revising the County's policy.

e) Procurement

Jefferson County will utilize requests for proposals and other means of comparison when appropriate to procure services. All procurement activities will adhere to rules specified in the Jefferson County Purchasing Ordinance in addition to state and federal laws.

3. Problems Encountered

As the Land Information System capabilities have increased, so has the amount of staff assets required for managing Land Information Systems. The resources needed to maintain and manage systems will necessitate either more contracting of technical services or adding technical staff in the future.

D. Custodial Responsibilities

The land records custodial responsibilities listed below are for data sets maintained by Jefferson County listed by department, followed by the statute, administrative code, ordinance or policy that provides such authority. Substantial record holdings that are on file in County offices and maintained by another entities are not included. The County is not seeking additional custodian responsibilities. Requests for custodianship of data produced and maintained by other agencies will be evaluated based on overall program needs and resources.

County Surveyor:
Public Land Survey System (PLSS) Corner tie sheets, section summaries, high accuracy geodetic control network monument sheets, private surveys, GPS post processing data (59.45)

Emergency Management and Parks:
Offsite hazardous materials emergency response plans, special facilities database and map (166.12)
Flood mitigation acquisition records (44cfr 78.5)

Highway Department:
Right of way plats, construction and bridge plans, culvert, pavement maintenance records, signage, traffic code, driveway permits, utility easements, tile casings permits (83)

Land Conservation Department:
Farm preservation conservation plans (91)
Land and water management plans (27)
Notice of discharge plans and engineering NR243 (92)
Transect survey data (internal policy)
Hydrology data (internal policy)
Watershed boundaries (internal policy)
Soils and water conservation data (92)
Cost Share Participants (92)
Conservation Reserve Program Geographic Component (USDA)
Wetland Reserve Program Geographic Component (USDA)
Livestock Survey (internal policy)
Non-Metallic Mining (135)
NR151 Compliance (NR151)

Land Information Office:
Ownership, description, parcel identification number, digital parcel maps, property assessments, school districts, school district maps, special districts, tax rates and special assessments (70.09)
Rural address assignments, site address maps (Jefferson County Uniform Numbering Ordinance)
1996, 2000, 2004/2005, 2010 digital Orthophotography, digital contours, terrain models, emergency medical services maps, fire district maps, land use (internal policy)

Register of Deeds:
Deeds, Mortgages, certified survey maps, subdivision plats, condominium plats, highway relocation plats, tract index, grantor/grantee index and other related documents (59.43)

Sheriff's Department:
Master address street guide (MSAG), dispatch records, accident records, crime records, complaint records, traffic citations (59.27)

Treasurer's Office:
Tax bills, tax rolls, tax receipts (59.25) drainage district payment records (88.18)

Zoning and Sanitation Department:
Zoning maps for all 16 towns, Re-Zoning applications, conditional use and variance applications, private sanitary sewer system permits, land use permits, tower location maps, extra-territorial limits, urban service areas, environmental corridors (59.69)
Floodplain, shoreland/wetland, rural hamlet and farmland preservation maps (91)
Drainage districts maps and records

E. Framework Data, System Implementation and Statewide Standards

1. Geodetic Positioning Reference Frameworks

a) Geodetic control networks

The Jefferson County High Precision Geodetic Control Network was completed in 1993 as a tri-county project with Dodge and Rock Counties under the guidance of the Wisconsin Department of Transportation. The countywide network consists of 47 stations and 47 Azmith stations. The County assumes custodial responsibility for the maintenance of control network stations. Digital data is reported in State Plane Coordinate System, NAD83(91). The Wisconsin DOT - Height Modernization Project added vertical othometric height data to about half of these stations in 2003. Additional vertical control monuments were added by the WHMP along level lines throughout the county.

Jefferson County has adhered to the following standards related to this data
Standards for Geodetic Reference Systems (FGDC/FGCC standards and specifications)
Wisconsin Statutes Chapter 236.18.

b) Public Land Survey System

The County Surveyor re-established the PLSS corners during a period between 1970 and 1992. Monuments have been placed at all corners excepts in locations that are inaccessible such as low lying areas. A computed position has been established for the inaccessible corners. The re-monumentation and maintenance program complies with the requirements of Wisconsin Administrative Code AE 7.08 and/or state statute.

Jefferson County has adhered to the following standards related to this data
Corner Remonumentation (Sec.59.63(1); Sec. 60.84(3)(c)WI stats)
Remonumentation Records (WI Stats. Sec. 59.635(2)(b);
Admin. Code AE 7.08(2))
Coordinate Values (FGCC Third Order Class I)
Standards for Geographic Control Data (FGCC Third Order Class II for Horizontal Coordinate Values and Third Order for Elevation Values)

2. Orthoimagery and Georeferenced Image Base Data

a) Photogrammetric Base Maps

The County has chosen not to procure planimetric base maps in recent years due to ongoing maintenance issues. The Village of Johnson Creek and City of Lake Mills partnered with Jefferson County to contract for planimetric features for storm water management in 2004. Several other cities and villages partnered with the Jefferson County back in 1994 to contract for planimetric mapping as a base map for parcel mapping.

b) Digital Orthophotography

The County acquired black and white orthophotography in 1996 with 18 inch pixel resolution, six inch pixel orthophotography in 2000, six inch pixel for the north half of the county in 2004 and six inch pixel for the south half in 2005. Jefferson County participated in the Wisconsin Regional Orthophoto Consortium (WROC) in 2010 to acquire twelve inch color orthophotography in 2010. The county plans to acquire new orthophotography every 5 years.

c) Satellite Imagery

High resolution satellite imagery may become a viable replacement or supplement to standard orthoimagery in the near future. The County will follow developments in satellite imagery products along with other regional, state and federal imagery programs to determine the most cost effective way to acquire aerial imagery.

d) Digital Raster Graphic

Digital Raster Graphics have been used to view USGS topographic maps and for some conversion projects on a limited basis.

e) Oblique Aerial Imagery

The County acquired oblique imagery from Pictometry International, Inc. in the spring of 2008. Two way oblique images (from the north and south perspective) were captured county-wide. Four way oblique images were captured for most developed areas of the County.

f) Historical Aerial Imagery

The county has hardcopy aerial imagery dating back to the 1940's. Scanning and geo-referencing of old aerial photos is being undertaken by the Land and Water Conservation Department as time allows. Geo-referencing the photos will allow GIS overlay with other map layers.

3. Elevation Data Products and Topographic Base Data

a) Digital Elevation Models

The County acquired a digital elevation model as part of the 1996 orthophotography project capable of creating 10 foot interval contour maps to national map accuracy standards. That model was up dated in 2000 for some areas of the county as a part of an orthophotography project. Digital elevation models from the 2004/2005 terrain model project are generated as needed for mapping projects. The new initiatives portion of this plan proposes a project to complete a one meter DEM grid for the entire county from the 2004/2005 terrain model project.

b) Digital Terrain Models

A Digital Terrain Model (DTM) capable of producing 2 foot contours was completed by Light Detection and Ranging (LIDAR) in 2004 for the north half of the county and 2005 for the south half of the county. There are plans in the new initiatives section of this plan to update the DTM in 2015. The Highway 26 four lane expansions and the bypass of the Cities of Jefferson and Watertown have severely altered the terrain in the highway corridor and near by area barrow pits.

c) Triangulated Irregular Networks

The County used the 1996 terrain model to produce a triangulated irregular network (TIN). Section and Quarter Township TINs were developed form the 2004/2005 terrain project.

d) Contours

Two foot contour intervals maps have been developed for the entire county from the 2004/2005 terrain model project. These contours will be updated as new terrain model data is acquired.

e) LIDAR

Jefferson County has LIDAR point data from the 2004 and 2005 terrain mapping project. The datasets include bare earth and the unedited point cloud. A new LIDAR project is planned for 2015.

f) IFSAR

Jefferson County has not used Interferometric Synthetic Aperture Radar at this time.

4. Parcel Mapping

a) Preparation

The digital parcel maps are referenced to the PLSS and are suitable for assisting with land title boundary or survey line determination. However, the parcel maps are not a substitute for a legal land survey or a guarantee of title. The digital parcel maps were developed through two conversion methodologies. The rural areas were converted by digitizing existing parcel maps and rectifying them to the Public Land Survey Corner control. The Cities and Villages converted by first creating a planimetric base map and then using Coordinate Geometry (COGO) input of surveys and subdivisions plats to construct the parcel boundaries. The county-wide digital parcel maps were complete during 1995. The parcel maps are compliant with WLIA Digital Parcel Mapping Standards.

b) Coordinate System

Parcel maps are in the State Plane Coordinate System, South Zone, NAD 83(91).

c) Parcel Identification Number

The Jefferson County Parcel Identification Numbers (PIN) is in accordance with the WLIA Parcel Geo-locator Standard.

5. Parcel Administration and Assessment Information

The Jefferson County tax collection and real property listing systems support the integration of digital parcel maps with property ownership information by linking data through key fields such as the PIN that identifies the section, township and range of the U.S. Public Land Survey.

a) Parcel ID

Each tax parcel has a Parcel Identification Number (PIN) assigned in accordance with the WLIA standard.

b) Tax data

All tax and assessment data on the IBM System I server is linked to the GIS parcel data by the PIN.

c) Site Address

The site address is maintained on the tax and assessment database on the IBM System I server

d) Owners Name and Address

The owners name and address are maintained on the tax and assessment database on the IBM System I server

e) Description/Current Document Pertaining to Parcel

The transfer history that references recorded documents for each parcel are maintained on the tax and assessment database on the IBM System I server.

f) Document Imaging

Document imaging system was started in the Register of Deeds in 1996. Images of recorded documents dating back to 1901 are currently available on the system. These documents are cross referenced to the imaging system through instrument number in the GIS and IBM System I databases. The Land Information Office, County Surveyor, County Treasurer and Zoning also have documents stored on the document imaging system.

g) Real Estate Transactions

Jefferson County began requiring parcel identification numbers on all documents conveying any interest of land on January 1, 1997. A tracking system to create a history of conveyance documents for each parcel was added to the IBM System I Tax and Assessments System in 1998. The Register of Deeds Office maintains a grantor/grantee indexing system that was computerized in 1987. The Register of Deeds implemented tract indexing system in 2010 to the IBM System I The tract index will cover all documents from this time forward.

h) Easements and Restrictions, Including Conservation Easements

Known ingress and egress easements along with document references are shown on parcel maps. A GIS layer has been developed and is maintained for conservation easements that are recorded in the Register of Deeds office.

i) Tax exempt lands

Tax exempt status for each year is maintained in the assessment information for each parcel.

j) Zip Codes + 4

The Zip for each site address is maintained in the tax and assessment database on the IBM System I server. The plus 4 code are not maintained for site addresses.

k) Assessment class

Assessment classifications, including tax exempt lands are carried as a code in the tax database and can be linked to the GIS parcel coverage.

l) Public Lands

Jefferson County has developed and maintains a public lands GIS layer for all County, State and Federal lands that are more then a couple acres in size.

m) Leins

Federal tax liens are recorded in the Register of Deeds. The tax lien documents are entered into the grantee/grantor index.

n) Evidence of Title

Land title documents are referenced in the tax and assessment database by document number. The title history goes back to 1996 when the current tax and assessment system was installed. They are also entered into the grantee/grantor and tract index systems in the Register of Deeds office.

6. Street/Road Centerlines, Addresses Ranges and Address Points

a) Transportation

The transportation network location files for public roads, railroads and trails are maintained on the GIS.

b) Rights of ways

Rights-of-way data for public roads, railroads and recreational trails have been developed as part of the digital parcel mapping process.

c) Centerlines

A road centerline GIS layer has been developed from the parcel map for all public roads in the County. A second road centerline file has been created to match the road pavement. The pavement centerline file has passed Census Bureau positional accuracy requirements to be incorporated into the 2010 Census TIGER/line files. This pavement centerline file is also used in the 911 Computer Aid Dispatch in the Sheriff Department.

d) Address Ranges

The County road centerline map layer has address ranges, road names and the date for the survey or plat attached to each road segment. However, some roads segments have two address systems for property adjacent to them. The County will continue to investigate database designs that accommodate complex addressing models for routing and other road network applications.

e) Site Address Database

A site address database is maintained on the IBM System I midrange server. The site addresses are part of the overall property assessment and tax system. The site address data base is compliant to **US Postal Addressing Standards Publication 28** with few exceptions.

f) Address Point, Structure or Driveway

A site address point GIS layer is maintained for each principal structure. The approximate location is entered for new structures that don't appear on aerial imagery.

g) Road Names

Road names are stored as attributes for line features in the centerline databases.

h) Functional Class

The functional class is not part of our centerline database at this time.

i) Places and Landmarks

Jefferson County has developed a GIS map layer for named places described as unincorporated villages which usually have a mix of residential and limited commercial structures.

j) Integration with the County's/City Master Address Guide

The road center line data model limits the integration of rural and city address systems. These limitations are overcome by using the address point layer for initial location searches.

k) Emergency Planning and Response

Transportation layers along with GIS data listed in Section II. E. 12 of this plan have been use in the All Hazard Mitigation Planning process. These layers are readily available for the Emergency Operations Center (EOC) should they be needed in response to a large scale disaster.

l) Wireless 911

The Sheriff Department 911 Dispatch center uses road centerlines, address points and other GIS layers to automatically display the location of wireless 911 calls. Land line calls are displayed in a similar fashion using address geocoding.

7. Hydrography, Hydrology and Wetlands Mapping

a) Hydrography

A surface water features layer has been developed on the GIS that include rivers, lakes, flowages, streams and drainage ditches from the 2004/2005 terrain mapping project.

b) Watersheds

Sub-watersheds maps have been developed for the Rock Lake and Lake Ripley priority watersheds.

c) Hydrogeology

A ground water flow study of the entire Rock River basin has been recently done by USGS for the Rock River Coalition and contributing partners. The Land and Water Conservation Department have plans in the new initiatives section to incorporate some of the ground water flow study information into the GIS system.

d) Impacts on the environment

The Land and Water Department has plans in the new initiatives section of this plan to integrate invasive species and other environmental data into the GIS system for analysis and distribution.

e) Wetlands Mapping

Jefferson County is using DNR digital wetlands maps under Wisconsin Statute 23.32. County ordinance has adopted this as the regulatory standard for wetland delineation.

8. Soils Mapping, Land Cover and other Natural Resources

a) Soils Mapping Activities

Jefferson County partnered with the Natural Resources Conservation Service (NRCS) to convert the hardcopy soils survey maps to a digital format in 1994. Attribute information has been maintained in cooperation with NRCS. The digital soils maps have been certified by NRCS to be compliant to their national standards.

b) Land Cover

Jefferson County does not have digital land cover data at this time.

c) Forests

A GIS layer for all upland woods over 10 acres was developed for environmental corridors as defined in the 1999 Farmland Preservation and Land Use Plan. The county has a managed forest law GIS layer for all wooded lands enrolled in that program. The 2008 land use inventory also has a category for upland woodlands.

d) Geology

The new initiatives section of this plan includes a project under the Land and Water Conservation Department to incorporate Geology data into the GIS system.

e) Non-Metallic Mining

The Land and Water Conservation Department have mapped licensed Non-metallic mine locations.

f) Endangered Resources

Sensitive environmental areas have been mapped in the Rock Lake and Lake Ripley priority watersheds.

9. Land Use Mapping

a) Existing Land Use

The County has developed a land use inventory for all of the Towns based on the 2008 orthophotography. The classification system is based on universal codes that are widely accepted in the professional planning field.

b) Planned Land Use

A future Land Use map is under developed as part of the Comprehensive Land Use Plan update. Future land use maps are available for all local municipalities that have Comprehensive Smart Growth Plans.

10. Zoning Mapping

a) Zoning Districts

Digital zoning maps have been developed in conjunction with the digital parcel maps for all 16 Towns in Jefferson County. Zoning amendments made by the Jefferson County Board are incorporated into the digital zoning maps each month.

The Land Information Office provides zoning map services for two villages and one city that have been incorporated into the countywide zoning map layer. Zoning classifications identified in the County Zoning Ordinance are used for all towns. Each Village and City has a zoning ordinance and classification system. The Land Information Office is working with other Cities and Villages to incorporate their zoning information into the countywide zoning layer. The Land Information Office will work toward implementing a system for cities and villages to revise the county-wide zoning map for eventual display on the county GIS website.

b) Shorelands Zoning

A digital shoreland wetland map has been developed by using the GIS to identify lands within 1000 feet of lakes and flowages or 300 feet of rivers and streams or floodplains connected to these water features. This GIS layer is a guide and should be verified by zoning department staff for individual properties. Some properties may require field investigations.

c) Floodplains and floodways

Digital FEMA mapping has been incorporated into the GIS system. The floodplain maps comply with DNR floodplain Zoning NR115/117. New Digital Flood Insurance Rate Maps (DFIRM) went in to effect on June 2, 2009.

Jefferson County has 148 square miles of floodplain mapped by the recently completed update of Flood Insurance Risk Maps as having 1% risk of flooding each year. Only 54 square miles have detailed flood studies that provide base flood elevations (BFE) for accurate floodplain mapping. The balance of 94 square miles of the flood hazard areas have been mapped by estimate or approximate methods. These unstudied flood hazard areas include portions of 24 lakes, rivers and streams that are tributaries of the Rock River. The County will continue to look for grants and other funding mechanisms to complete detailed flood studies of these areas.

As part of their risk map initiative FEMA has selected the Rock River for restudy and update of the DFIRMs that would be affected. The restudy of the Rock River was to begin in 2009 and is pending completion.

d) Environmental Corridors

The Environmental Corridor System adopted in the 1999 County Agricultural Preservation and Land Use Plan includes the following natural resource features 100 year floodplains, wetlands, steep slopes over 20%, upland woods over 10 acres and public lands. The County acquires GIS map layers such as wetlands from the DNR and other custodial agencies as they become available.

e) Burial Sites

The County Farm Potters Field burial site has been mapped. The site was used for burial of wards of the County in the late 1800s and early 1900s. Cemetery plats are recorded in the Register of Deeds Office for most cemeteries. The Land Information Office has a

cemetery layer file that provides the name and location of all cemeteries in the County. Some of the smaller burial sites that have been registered with the Historical Society that are exempt from property taxations are shown on the County parcel mapping system.

f) Archeological Site

The Land and Water Conservation have mapped Indian mounds at Indian Mounds County Park for the Parks Department. Other mound sites in County parks are planned for mapping in the future.

g) Historical and Cultural Sites

An inventory of historical sites has been conducted for a portion of the County by the Historic Sites Preservation Commission. A GIS layer of these sites may be incorporated into the GIS data in the future when the inventory is complete.

h) Extra-Territorial Platting Control

Extra-territorial platting control areas have been delineated using the GIS buffering to identify the 1½ or 3 mile areas around cities and villages. The boundaries of the extra-territorial areas change as annexations or detachments change municipal boundaries.

i) Urban service areas

Urban service areas were delineated for each city, village and sanitary district in the County Agricultural Preservation and Land Use Plan adopted in October of 1999. The Urban Service Area (USA) delineations are under study as part of the Farmland Preservation Plan update. The USA may also be remapped during the development of a future land use map to complete a general update of the County Smart Growth Plan.

11. Election and Administrative Boundary System

a) Election

The County has ward and supervisory district boundary GIS layers that were developed during the reapportionment process in 2001. The Supervisory districts are updated to incorporate annexations and detachments as they are recorded.

b) Legislative Districts

The County has legislative districts in Portable Document Format (PDF) only.

c) Utility Districts

The Sanitary District boundaries are maintained on the GIS.

d) School Districts

The tax and assessment database on the IBM System I has school district codes. A school district boundary layer has also been developed on the GIS.

e) Tax Incremental Financing Districts

Tax incremental finance districts are tracked on the IBM System I property records. A TIF district map is planned for future development.

f) Zip Codes

A zip code GIS database has been developed through the site address layer and tabular site address database on the IBM System I

g) Census Geographies

The 1990 and 2000 census blocks and block number areas (tracts) have been incorporated into the GIS. The 2010 census map layers will be added to the GIS system when they become available.

h) Civil division boundaries

The County maintains a municipality boundary layer on the GIS and updates it when annexations or detachments are recorded in the Register of Deeds Office. The Land Information Office participates in Census Boundary and Annexation Survey on an annual basis.

i) Public Lands

A public lands map layer has been developed on the GIS for public land in the rural areas (towns) that include public hunting grounds, parks, conservancy lands, state forests and wildlife areas.

j) Native American Lands

There are no lands that are under Native American control or ownership in Jefferson County at this time.

k) County Boundaries

County boundaries for Jefferson County are along PLSS survey lines that have been incorporated into the GIS.

l) State Outline

A state outline map is stored on the GIS server for cartographic purposes only.

m) Lake Districts

The tax and assessment database on the IBM System I have codes that identifies parcels that are in lake districts.

12. Critical Infrastructure and Facilities Management

a) Emergency Services Areas

Emergency Medical Service Districts and Fire Districts are maintained on the GIS system and have been incorporated into the 911 Computer Aided Dispatch. These districts are updated when local municipalities make changes in their contract for these services.

b) 911 Call Center Service Area

The Jefferson County Sheriff's Dispatch Center covers all of Jefferson County except for the areas in the City of Fort Atkinson and City of Watertown. Some of the other cities and villages manage 911 calls on a more limited part time basis. These service areas are all defined by municipal boundaries.

c) Fire and Police Districts

A Fire district GIS layer is maintained by the Land Information Office for the Sheriff's Department Computer Aided Dispatch (CAD) system. The CAD system displays district

boundaries as needed for fire calls. Police Districts are based on the municipal boundary layer.

d) Police/Fire Stations

Police and fire station map layers were developed a part of the All Hazards Mitigation Planning project.

e) Hospitals and Health Care Facilities

Hospitals and Heath Care map layers were developed a part of the All Hazards Mitigation Planning project.

f) Government Facilities

Community centers, libraries, municipal garages, post offices and senior centers map layers were developed a part of the All Hazards Mitigation Planning project.

g) Utilities

Crude oil pipelines, electrical substations, natural gas facilities, and natural gas pipelines were mapped as part of the All Hazards Mitigation Planning project. The map layers for these facilities are very general in nature and not meant to have a high degree of positional accuracy.

h) Parks & Recreational Trails

County and State Parks and natural areas have been mapped in a public land GIS layer. Facilities mapping is planned for all County Parks and the County Fair Park Grounds in the new initiatives section of this plan. Recreation trails and some facilities were added to the mapping system during development of the Official County Map and the County Bicycle and Pedestrian Planning process. Private campgrounds were mapped as part of the All Hazards Mitigation Planning project.

i) Transit System

There are no public transit systems in Jefferson County.

j) Bridges, Culverts and Traffic Road Signs

The County Highway Department maintains a bridge inventory for semi-annual inspection. Bridge location layers were developed as part of the All Hazards Mitigation Planning project. A more extensive bridge and culvert inventory is planned in the new initiatives section of this plan. The County Highway department also maintains a sign inventory for all county highways. Sign inventory map layer development is part of this plan.

k) Airports and Fields

An Airport map layer was developed as part of the All Hazards Mitigation Planning project.

l) Boat Landings

A Boat landing map layer was developed as part of the Official County Map project.

m) Hazardous Materials Sites

Hazardous materials site locations that store chemical quantities above the planning threshold are mapped in the Computer-Aided Management of Emergency Operations (CAMEO) system for developing offsite hazardous materials emergency response

n) Telecommunications Towers

A digital telecommunications tower map has been developed for all towers that required county approval and most other towers. The tower map is used to facilitate co-location of telecommunication equipment.

o) Landfills

There is one active landfill in Jefferson County at this time. The Planning and Zoning Department has some data on closed landfill sites that have caused environmental problems.

p) Special Facilities

Emergency Management keeps a special facility map for police, fire, schools, hospitals, nursing homes, group homes, residence homes, day care and other facilities in the Computer Aided Management Emergency Operation (CAMEO) data. These features are also mapped in the County All Hazards Mitigation Plan. Additional work on this database is proposed in the new initiatives section of this plan.

13. Database Design and System Implementation

a) Design Evaluation

Jefferson County follows industry accepted standards for database design and system engineering. The standards are evaluated on an ongoing basis.

b) Project Approach

Integration of existing data is assessed before embarking on developing new datasets. New datasets are designed to meet short-term project needs and long-term goals. System wide access, management and integration are ongoing considerations.

c) Timelines

Timelines are dictated by project and departmental needs. Mission critical functions receive the highest priority.

d) Metadata

FGDC compliant metadata will be developed for Countywide and other significant GIS data sets and will be submitted for posting on the WLIB clearinghouse.

e) Security/Privacy

The County MIS department maintains system security. Security is based on restricting physical access to computer equipment and password protected at appropriate levels for users. The MIS department maintains a system firewall to block unwanted intrusion from outside the countywide network. Jefferson County adheres to the Wisconsin Open Records Law and complies with all relevant state and federal law for access to restricted records.

f) Implementation and Maintenance Strategy

In house implementation is used when adequate levels of technical resources are available. Consultants are brought in to supplement in house staff where projects require highly specialized skills. Staff training is undertaken to maintain systems and databases.

g) Data quality management

Quality Assurance and Quality control measures are implemented on a project by project basis.

h) Needs assessment

Need assessments are done to varying degrees on each new data conversion or system enhancement project.

i) Data Structure and Format

Land information data is stored in industry standard structures and formats that allow GIS, Imaging and Database software systems to efficiently access records for retrieval, display and update.

j) GIS data models

Data models are developed to meet the ongoing program needs of GIS users.

k) Data dictionary

Data dictionaries are maintained in the metadata that is tied to each database

l) Coding schema

Coding schemas are a maintained in the metadata for each data series.

m) Transaction management

Versioning is used to manage database updates for most GIS databases. SQL Server and DB2 transactional protocols are used to manage other datasets.

n) Organizational information flows

Work flows are managed manually at this time. The new initiative section of this plan proposes some automated work flow development for processes that involve multiple staff and departments in the Planning and Zoning and Land Information Departments.

o) Data conversion

Most of data conversion proposed by this plan will be contracted with private vendors. Back scanning of Register of Deeds documents is by far the most labor intensive conversion activity that is proposed.

p) Ability to integrate with other databases and information systems

Data exchange standards set by the WLIA and other industry standards are adhered to for public and private agency exchange

F. Public Access

a) Use of technology to facilitate efficient access:

The County has 4 public access computers available in the Register of Deeds Office to search and view the grantor/grantee index and view the document images. The Land Information Office, Zoning and County Treasurer's office have one public computer to access the Tax and Assessment System, GIS and Document Imaging.

b) Use of Third Party Technology for Access

Jefferson County uses Google Earth, USGS, DNR, NRCS, ESRI and other third party websites to access data when appropriate.

c) Data Sharing

The following policies govern data distribution and fee waivers for data sharing.

Jefferson County Policy for Distribution of GIS Data Sets

The purpose of this policy is to provide a basic framework to address requests for GIS data sets from parties outside Jefferson County government. Data sets covered by this policy include but are not limited to Geographic Information System (GIS) database and image files that represent land information as defined in Wisconsin Statute 16.967(1)(b).

The fees for GIS data sets reflect costs for staff, equipment and materials to develop and execute systems for data distribution. The County will promote efficient and effective government though sharing of data resources with outside governmental units and non-profit groups affiliated with Jefferson County programs and services. Users who purchase the 2004/2005 terrain mapping products covering a township or greater area shall agree not to redistribute said data outside their organization. Users who obtain GIS data sets of any type through fee waivers shall agree not to redistribute said data outside their organization.

General Public users requesting GIS data sets shall pay fees established herein for the 2004/2005 terrain mapping data sets and according to the Land Records Inter-Departmental Fee Schedule adopted by the Jefferson County Board resolution (98-49). Fees for other data sets not specifically set shall be based on the per hour charge for custom map development or file processing as set by the Land Records Inter-Departmental Fee Schedule plus materials. Hourly charges shall cover staff and computer time.

Governmental and Educational: Jefferson County shall encourage more effective and efficient use of land records through data sharing by waiving fees for governmental units such as towns, villages, cities, state and federal agencies, universities, schools, sanitary districts, lake management districts or their consultants. Users receiving waivers shall agree not to redistribute data. The user shall demonstrate a need for specific GIS data sets to receive a fee waiver. Wide-ranging or blanket requests for GIS data without a specific need shall not receive fee waivers.

Non Profit groups or agencies that have an affiliation with County programs or services may receive fee waivers. The requestor shall demonstrate the affiliation making them eligible for fee waiver. If the affiliation with County programs and services is not sufficiently justified the Land Records Fee Schedule shall apply. The County Planning and Zoning Committee shall make final determination as to application of fee waivers where the group's affiliation with County programs or services is unclear. The user shall also demonstrate the need for specific data sets to receive the fee waiver. Wide-ranging or blanket request for GIS data without a specific need shall not receive fee waivers.

Data Sharing Agreements: Jefferson County may require users receiving data with fee waivers to enter into a formal data sharing agreements where the user has or will develop data that would be beneficial to the County programs or services. County departments may enter into these agreements when there is mutual benefit from sharing data resources.

Agreement Form

DISTRIBUTION AGREEMENT FOR JEFFERSON COUNTY GIS DATA

Agreement made this the _____ day of _____, 20___, by and between Jefferson County

(hereinafter "County") and _____ (hereinafter "User").

General Terms The County Geographic Information System (hereinafter "GIS") data sets included files developed by or for County to facilitate governmental services and programs. The GIS files include but are not limited to digital data that represent property ownership, aerial photography, contours, terrain models, district boundaries, roads, rivers, lake and streams, zoning, land use and other cultural features (hereinafter "data sets"). By signing below, User agrees to abide by all terms and conditions of this Agreement. This document constitutes the entire agreement between the parties, and it supersedes any prior agreement, oral or written. Requests for data sets shall not be filled until the user has filed a Distribution Agreement for County GIS Data Sets in the Land Information Office.

County Rights in Data Sets: Redistribution of County's data sets by User outside of User's organization/entity is expressly forbidden. User shall not assign or transfer any interest or obligation in this agreement, whether by notation or assignment, without prior written consent of County. Any unauthorized distribution or notation or assignment shall be grounds for immediate termination of this agreement.

Credits Any hardcopy of original data sets shall clearly indicate their sources as "Jefferson County Land Information Systems." If User modifies the data in any way whatsoever, User is obligated to describe the type(s) of modification(s) they have performed on the hardcopy. User specifically agrees not to misrepresent County GIS data sets, nor to imply that County approves changes User has made.

Updates Data sets Data sets are provided on a one-time basis. County is under no obligation or duty to specifically inform users of or provide users with any updates to the data sets thereafter. The burden of ordering and paying for updated data sets is held entirely by User. The user will restrict access except as otherwise required by the applicable law, subpoena, or court order.

Liability County makes no warranty or representation, either expressed or implied, with respect to the data which have been provided, or the quality, accuracy, performance, merchantability, or fitness for a particular purpose. Therefore, the data sets are transferred "AS IS" without any support whatsoever, technical or otherwise, and User is assuming the entire risk as to the quality and performance. The data is neither a legally recorded map nor a legal land survey and is not intended to be used as such. In no event will County, it's elected or appointed officials or employees or any third person(s) who have been involved in the creation, production, or delivery of the data set(s), be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect in the data or its documentation. In particular, County shall have no liability for any damaged data stored or used, including costs of recovering such data. This disclaimer shall apply not only to the current transfer of data by the County to User but also to any future transfer of data.

The parties agree that this Agreement shall be governed by, construed and enforced in accordance with the laws of the State of Wisconsin.

d) Open access to data in existing format:

The County adheres to the Wisconsin Open Records Law for access to land records and the policies in under Data Sharing above.

e) Subscription-Based or Public-facing sites

Remote access to Tax and Assessment, and Register of Deeds Grantee/Grantor System is available for a quarterly fee through a remote access server. Copies of digital map data are available in hard copy form or on a CD-ROM. The Jefferson County Land Records Search website provides public access to general real property information stored in county databases such as ownership, assessed value, taxes, parcel size, and sale amounts. The Geographic Information System (GIS) mapping website provides public access to interactive map layers such as tax parcel, county zoning, soils, orthophotography, floodplain and wetlands.

f) Optional production of customized data on cost-recovery or other basis:

The County offers customized digital data or hardcopy on a per hour fee basis.

g) Internet Accessibility

Jefferson County uses appropriate fonts and website designs to comply with ADA when feasible.

h) System security:

The County Management Information Services Department maintains network, GIS server, IBM System I and imaging system security. Outside access to the County computer network is shielded from intrusion by a firewall and system monitoring. The county has a Computer, Internet and Telephone Use Policy which helps limit security issues.

i) Privacy Policies

The County adheres to the Wisconsin Open Records Law and complies with all relevant state and federal law for access to restricted records.

j) $2 Land Information Fee sec. 59.72(5)(b)3

This funding has been used to support systems to index and access housing related information with greater internet public access to records. Two Internet servers software and support services for publishing land information on the internet have been funded by this fee. Additional internet bandwidth to support publishing land records on the worldwide web is anticipated for these funds. Expenditures for capturing and indexing housing related data is also planned.

G. Integration and Cooperation

Jefferson County has actively encouraged and supported integration and cooperation activities related to land records modernization. The County will pursue means for collaboration and marshalling of resources toward integration and data sharing strategies. These policies have potential to benefits to counties, cities, villages and towns, as well as other local, state and federal agencies, utilities, private firms, and educational institutions. The development of more widely distributed metadata is a central component of the county data sharing strategies.

The County has data sharing policy that is in accordance to the Wisconsin Open Records Law and has implemented formal data sharing with Wisconsin DOT District 1 for orthophotography and other GIS data. The County has also shared GIS and other data with numerous state and federal agencies. The County has informal data sharing arrangements with local municipalities and other government agencies. Some GIS datasets have been posted at the Arthur H. Robinson Map Library in the Department of Geography, University of Wisconsin-Madison for student and faculty research projects. The County plans to continue the informal agreements and seek formal arrangements as needs require. Additional data sharing partnerships that would be mutually beneficial to facilitate data access, exchange and distribution are anticipated. The County is currently participating in the Wisconsin Regional Orthophotography Consortium (WROC) to obtain 2010 imagery county-wide.

The public Land Records Search and GIS Interactive Mapping websites provide access to municipalities and other agencies. A higher level of access for public agencies users will be added as the websites develop to provide wider participation and use of land records resources. In addition to the websites, the Data Distribution Policy provides for fee waivers to facilitate public agencies access to land records datasets.

A County Land Information Council facilitates participation, coordination and funding allocations for numerous County Departments. The Council members include eight department heads or managers and one county board member and a representative of the Realtors Association. This group represents wide spectrum of the land information users. The Council structure insures that land records modernization expenditures benefit a broad user community.

H. Communication, Education, Training and Facilitated Technical Assistance

a) Documentation of County Data

Metadata for most GIS data has been complied in a format developed by Land Information staff. Metadata in Federal Geographic Data Committee (FGDC) compliant format has be done for about 30% of the county-wide and other significant data sets where the County has principle custodianship responsibilities. Further development of FGDC compliant metadata is planned in the on-going activities section.

b) Resources available

Jefferson County is in close proximity to the University of Wisconsin-Madison Land Information & Computer Graphic Facility and Wisconsin Land Information Board. County personnel attend land information seminars and workshops on a regular basis. Several county staff are members of the Wisconsin Land Information Association and other professional associations. Consultants will also be hired for technical assistance as needed.

c) Identification of customer needs

The County has established a Land Information Council as directed by state law. The council is made up of the 8 department heads or managers in addition to a County Board member and a member of the Realtors Association. The Council members are in contact with land records customers on a daily basis. The county may use internet surveys to get feedback form users about land records services.

d) Coordinating Education/Training with agencies, associations, and educational institutions

Jefferson County has a long standing commitment of supporting staff education programs by providing funds for membership, registration and travel to education

opportunities. The educational and training activities are coordinated through the budget process.

e) Use of Technology to facilitate education and training

Jefferson County has access to the Internet, UW Extension ETN and satellite down link systems educational programs. Online classes and seminars are being used as a viable alternative when appropriate.

f) Use of Clearinghouse and Technical Assistance List Server

The County has implemented internet service that is available to all departments and is used to access the Clearinghouse and List Server. The County has provided Metadata for all datasets funded by Land Information Grants to the Wisconsin Land Information Board. Metadata will be made available to the Data Clearinghouse as it is completed. The County Land Information Officer monitors the Technical Assistance Server for new information.

g) LIO Education and Training Grants

The LIO Education and Training grants are used to send county staff to the Wisconsin Land Information Association's annual conference. The County Land Information Officer maintains a membership in the land info technical assistance email listserv (DOA-Landinfo@lists.wi.gov)

I. Administrative Standards Not Associated With Foundational Elements

Plans represent an agreement between the County and the Wisconsin Department of Administration (DOA). This agreement is intended to effectuate the objectives of the Program as embodied in the enabling legislation. In order for a plan to be acceptable to the DOA, the DOA and the County agree and consent as follows below. If applicable, discuss any plans, problems, issues, or concerns relative to these agreements.

1. The county agrees to observe and follow the statutes relating to the Wisconsin Land Information Program and other relevant statutes.

2. The county agrees to permit the Wisconsin Department of Administration access to books, records and projects for inspection and audit.

3. The county agrees to complete the GIS Inventory Survey (survey required annually by WLIP).

4. The county agrees to update the plan every 5 years and in the interim if the plan should change.

5. Development and implementation of an acceptable plan confers certain benefits on local government within a county, including continued eligibility for Program funding. A peer review process will be used to assess plan acceptability by the land information community.

6. The 5 year updates of the plan will be approved by the full County Board.

7. Interim amendments to the plan will be made by the County Land Information Council.

ACRONYMS

ALOHA	Aerial Locations of Hazardous Atmospheres
CAD	Computer Aided Dispatch
CAMEO	Computer-Aided Management of Emergency Operations
COGO	Coordinate Geometry
COLD	Computer Output to Laser Disk
DATCP	Department of Agriculture, Trade and Consumer Protection
DNR	Department of Natural Resources
DOT	Department of Transportation
DEM	Digital Elevation Model
DTM	Digital Terrain Model
ESRI	Environmental Systems Research Institute, Inc.
FGDC	Federal Geographic Data Committee
GIS	Geographic Information System
GPS	Global Positioning System
HTML	Hyper Text Markup Language
LWCD	Land and Water Conservation Department
LIDAR	Light Detection and Ranging
NAD	North American Datum
NGS	National Geodetic Survey
PIN	Parcel Identification Number
PLSS	Public Land Survey System
SQL	Simple Query Language
SAS	Software as a Service
TIN	Triangular Irregular Networks
TIF	Tax Incremental Finance
USDA-NRCS	US Department of Agriculture – Natural Resource Conservation Service
USGS	United States Geological Survey
WHPGN	Wisconsin High Precision Geodetic Network
WLIB	Wisconsin Land Information Board
WLIP	Wisconsin Land Information Program
WORM	Write Once Read Many